

**AMENDMENTS TO THE CLAIMS:**

1. (currently amended) A method for collecting and separating whole blood into one or more components comprising:

providing a disposable blood separation fluid circuit adapted to cooperate with a reusable separation controller, the fluid circuit including a fluid flow path for communication with a blood source, an initial collection chamber in fluid communication with the fluid flow path and a blood processing chamber in fluid communication with the initial collection container;

connecting the fluid flow path to a blood source;

collecting a quantity of whole blood from the source in the initial collection container;

mounting the disposable fluid circuit in association with the reusable controller;

processing the collected blood through the disposable fluid circuit and the processing chamber to separate it into the desired components and remove at least a portion of one of said components from the processing chamber; and

disconnecting the source from the fluid circuit after at least a portion of one of said components is removed from the processing chamber ~~said processing of the collected blood begins~~ and before all of the blood in the fluid circuit is processed in the processing chamber.

2. (canceled)

3. (original) The method of claim 1 in which the initial collection chamber includes a quantity of anticoagulant.
4. (original) The method of claim 1 in which about 200-750 ml of whole blood are collected in the initial collection chamber.
5. (original) The method of claim 1 in which about 500 ml of whole blood are collected in the initial collection chamber.
6. (original) The method of claim 5 in which a unit of whole blood is collected in the initial collection chamber.
7. (original) The method of claim 1 including connecting additional collection chambers of whole blood to the fluid flow path for processing through the fluid circuit.
- 8-9. (canceled)
10. (original) The method of claim 1 in which the blood source is a human.
11. (original) The method of claim 7 in which the blood in the initial collection chamber is processed sequentially.

12. (original) The method of claim 7 in which the blood in the initial collection chamber is processed simultaneously.

13. (original) The method of claim 1 including pooling together blood from other blood sources and flowing the pooled blood into the flow path for processing through the fluid circuit.

14. (original) The method of claim 1 in which about 405 - 550 ml of whole blood are collected in the initial collection chamber.

15-19. (canceled)

20. (currently amended) A method for collecting and separating whole blood into one or more components comprising:

- providing a disposable blood separation fluid circuit adapted to cooperate with a reusable separation controller, the fluid circuit including a fluid flow path for communication with a blood source and a blood processing chamber in fluid communication with the fluid flow path;

- connecting the fluid flow path to a blood source;

- collecting a quantity of whole blood from the source in the fluid circuit;

- mounting the disposable fluid circuit in association with the reusable controller;

- processing the collected blood through the disposable fluid circuit and the

processing chamber to separate it into the desired components and remove at least a portion of one of said components from the processing chamber; and

disconnecting the source from the fluid circuit after at least a portion of one of said components is removed from the processing chamber ~~said processing of the collected blood begins~~ and before all of the blood in the fluid circuit is processed in the processing chamber.

21. (previously presented) The method of claim 20, wherein the blood from the source is collected in an initial collection container prior to processing in the processing chamber.